



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,982	04/02/2007	Rolland Scholl	PO8720/STA-218	7386
23416	7590	10/06/2009	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ, LLP			MAI, NGOCLAN THI	
P O BOX 2207			ART UNIT	PAPER NUMBER
WILMINGTON, DE 19899			1793	
MAIL DATE		DELIVERY MODE		
10/06/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,982	Applicant(s) SCHOLL ET AL.
	Examiner NGOCLAN T. MAI	Art Unit 1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
 - 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1,3 and 6-11 is/are rejected.
- 7) Claim(s) 2, 4-5, 12-14 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/0256/06)
Paper No(s)/Mail Date ____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) Notice of Informal Patent Application
- 6) Other: ____

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-14, drawn to method for the production of fine metal powder.

Group II, claim(s) 15-19, drawn to fine metal powder.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: claim 15 is either obvious or anticipated by Kemp, Jr. et al (U.S. Patent No. 4,884,754). Accordingly the special technical feature linking two inventions such as metal powder prepared by method of claim 1 which is taught by Kemp (abstract and column 2, ll. 35-39) does not provide a contribution over the prior art, and no single general inventive concept exists. Therefore, restriction is appropriate.

During a telephone conversation with applicant's attorney Mr. Ashley Pezzner on September 18, 2009 a provisional election was made with traverse to prosecute the invention of group I, claim 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-19 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

It is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double

patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01. to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Claims 1, 3, and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kemp, Jr. et al (U.S. Patent No. 4,884,754).

Concerning claims 1 and 6, Kemp, Jr. discloses a process for producing fine powder flakes comprising milling copper powder particles to comminute the copper particles in the presence of organic surfactant in a non polar organic medium and produce intermediate flakes having thickness of less than about 3 microns, removing the major portion of the organic medium and organic surfactants from the intermediate flakes and fluid energy milling the intermediate flakes to reduce the diameter of the dried intermediate flakes and produce flakes having a diameter of no greater than 10 microns. See abstract. Kemp teaches (column 2, lines 35-39) the starting copper powder has particle size of less than 1000 μm in diameter and most typically less than about 250 μm which read on the claims starting powder having mean particle diameter D50 of greater than 25 μm . Note that the milling of copper powder and the fluid

energy milling read on the claimed deformation step and comminution step. Also note the ratio of particle diameter to particle thickness would encompass the claimed ratio given the employment of starting particle diameter and particle thickness desired by Kemp.

Concerning claim 3, copper is the powder produced which meet the claimed formula where C is copper being present in 100% by weight and h, i and k are zero.

Concerning claim 7, Kemp teaches using gas atomized copper powder which is well known in the art has spherical shape. See 2005/0182161 [0004] for such fact.

As for claim 8, Kemp teaches (column 2, lines 40-46) using attritor mill for deforming the powder particles into flake.

Concerning claims 9, 10 and 11, Kemp discloses the intermediate flakes, introduced into a fluid energy mill using high velocity jets of either air or inert gas, impact against either a solid substrate or each other at a sufficient force to shatter or break the particles into smaller fragments. See column 3, lines 4-24. The copper flake serves as the grinding aid and is formed in-situ.

Claims 2, 4-5, 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Kemp teaches forming metal powder of copper and fail to teach or suggest metal other than copper. Further Kemp does not teach deagglomeration after reducing the flake size. Also neither Kemp nor the prior reference teaches or suggests grinding aid is formed in-situ by adding reactive gas.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGOCLAN T. MAI whose telephone number is (571)272-1246. The examiner can normally be reached on 8:30-5:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit
1793

n.m.